查询ST7MDT1-EMU2B供应商

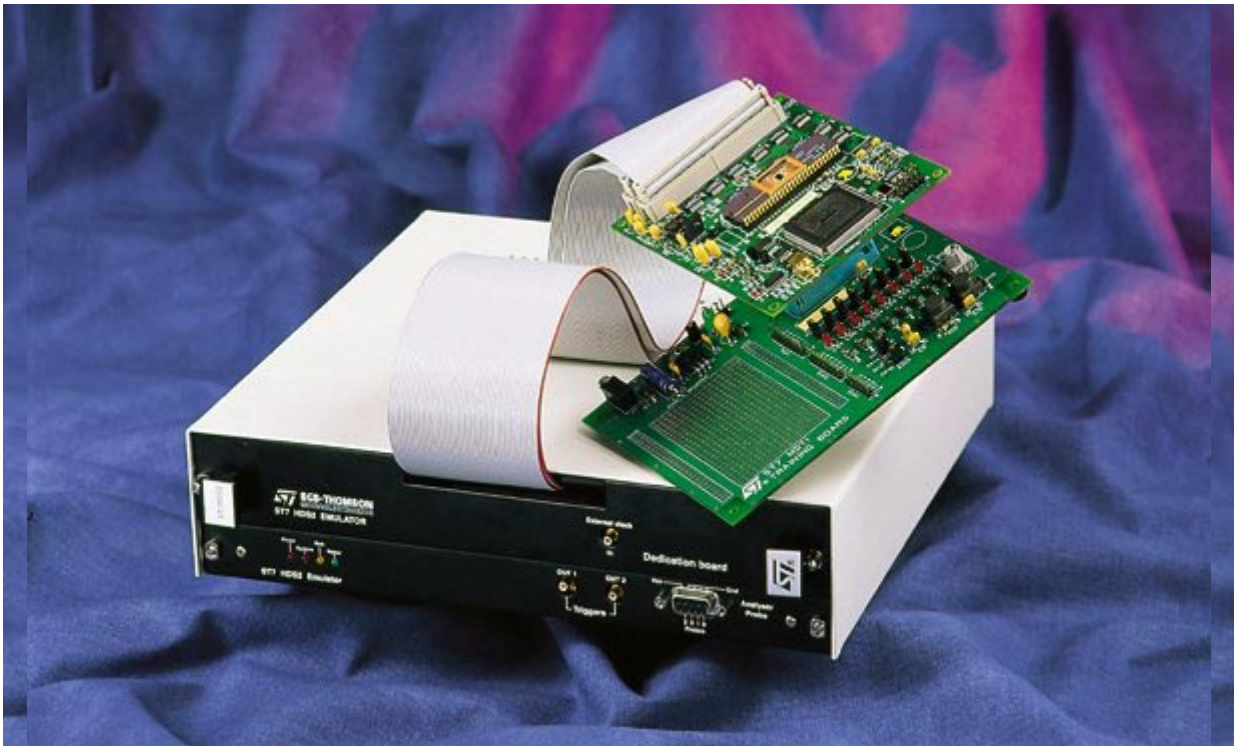
ST7MDTx-EMU2B

REAL-TIME DEVELOPMENT TOOLS FOR THE ST7 MCU FAMILY

FEATURES

- A common Hardware Development System mainframe supports the entire ST7 family of MCUs, in conjunction with the appropriate ST7xxx-DBE Active Probe.
- Real-time source level emulation allows viewing and breakpoint setting on high level source code rather than on disassembled target code for optimum user friendliness.
- 64 KBytes of user modifiable and configurable emulation RAM, allows memory mapping of all ST7 family devices as well as modelling hypothetical memory configurations.
- Unlimited breakpoints may be set for any op-code fetch or any address access, and conditions may be defined for the generation of 2 external synchronization signals.
- 1K by 32-bit wide trace memory allows complex and sequential events to be defined on any combination of address and data, as well as 3 internal and 5 external logic signals.
- User defined events may trigger a breakpoint or simply define data capture parameters, in accordance with user preferences.
- Simple connection of the emulator system to the Host PC via parallel port.
- Emulation system may be driven by a Windows-based GNU debugger software or DOS software running on host PC, allowing full control and monitoring of hardware resources.
- Multiple windows allow concurrent real-time display of source code, MCU resources, internal registers, trace data, etc.
- Log files allow storage and subsequent redisplay of any displayed screen for subsequent analysis.
- Command files can be used to execute a set of debugger commands in batch mode.
- Editable configuration files ensure tailoring of working environment to user preferences.
- Special Function Register window - symbolic display of SFR

.



OVERVIEW

The ST7 real-time development tools consist of various hardware and software components, which together form a flexible and sophisticated system designed to provide comprehensive development support for the ST7 family of MCUs.

The Hardware Development System (HDS) mainframe is common to all ST7 devices and, in conjunction with various active probes, allows emulation and development of specific devices. Only the probe needs to be changed to emulate a new ST7 family device.

The development system is controlled by a Host PC on which a choice of Windows-based software may be run. The Host PC is simply connected to the Emulator Mainframe by means of a parallel port. The STVD7 Windows Debugger software suite is supplied as standard issue with the Emulator hardware, in addition to the conventional DOS ST7 Software suite, which includes a macroassembler, a linker/loader. Third party C Toolchain and Debugger software is also available. The Windows-based debugger provides a user friendly and highly flexible interface which may be configured to precisely match the user's requirements. All emulator settings are accessible via the control software.

Once assembled, and/or compiled and linked, the application software may be downloaded to the real-time emulation memory, which can be configured, mapped and modified as required by the user. The device probe is then connected to the application target hardware in place of the MCU and real-time emulation of the target application can begin, thus allowing sophisticated testing and debugging of both application hardware and software.

User definable breakpoints allow the MCU to be halted when the application software accesses specific addresses, and/or addresses within a selected range, and/or on data fetch cycles. The user may then read and modify any register and memory location. An on line assembler/disassembler is also available to ease debugging.

An important feature of the ST7 development system is that true source level debugging is possible, meaning code may be viewed at source level and breakpoints may be set on high level code, rather than on disassembled target code. This is much more meaningful to the user and ensures a more convivial and productive development environment.

A separate and concurrent Logic Analyzer function is available. This hardware implemented function features 1KByte of 32-bit wide trace memory which allows events to be defined for any combination of address (16 bits) and data (8 bits), as well as according to the state of 3 internal and 5 external logic signals. Complex and sequential conditions may be defined, and all bits are maskable. The external signals are input from 5 probes which can be connected to the target hardware.

Trace memory events may be used as breakpoints or simply to trigger data acquisition according to user specified parameters, without halting the target system. Such a powerful tool enables the user to detect and trap virtually any pattern, and thus rapidly debug the target application.

Log files offer the ability to send any screen display to a text file. In particular, log files are very useful to save the contents of the logic analyzer and/or the contents of data registers to be subsequently analysed or printed.

Command files can be used to execute a set of debugger commands in batch mode, to simplify and speed up the emulation session.

The SFR window offers symbolic display of the SFRs, showing the peripherals, symbolic display of the registers.

Finally, when the target program is fully debugged, the appropriate ST7 EPROM/OTP/FLASH programming board can be used to program the EPROM/OTP/FLASH version of the target device to allow stand-alone testing and evaluation.

ORDERING INFORMATION

DEVICE	PACKAGE	EMULATOR	Active Probe
ST72C104	SDIP32/SO28	ST7MDT1-EMU2B	ST7MDT1-DBE2B
ST72C215/C216	SDIP32/SO28	ST7MDT1-EMU2B	ST7MDT1-DBE2B
ST72C254	SDIP32/SO28	ST7MDT1-EMU2B	ST7MDT1-DBE2B
ST72C124	SDIP42/TQFP44	ST7MDT2-EMU2B	ST7MDT2-DBE2B
ST72C334	SDIP42/TQFP44/SDIP56/TQFP64	ST7MDT2-EMU2B	ST7MDT2-DBE2B
ST72E5XX/T5XX/E311R/T311R	TQFP64	ST7MDT2-EMU2B	ST7MDT2-DBE2B
ST72141K2	SDIP32/SO34	ST7MDT5-EMU2B	ST7MDT5-DBE2B
ST72171K2	SDIP32/SO34	ST7MDT6-EMU2B	ST7MDT6-DBE2B
ST72411R	TQFP64	ST7MDT7-EMU2B	ST7MDT7-DBE2B

Please note that the customer can order either the whole system with the Emulator or only the Active probe, if he already has the HDS2 mainframe

Notes:

Information furnished is believed to be accurate and reliable. However, STMicroelectronics assumes no responsibility for the consequences of use of such information nor for any infringement of patents or other rights of third parties which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of STMicroelectronics. Specifications mentioned in this publication are subject to change without notice. This publication supersedes and replaces all information previously supplied. STMicroelectronics products are not authorized for use as critical components in life support devices or systems without the express written approval of STMicroelectronics.

The ST logo is a registered trademark of STMicroelectronics

©2000 STMicroelectronics - All Rights Reserved.

Printed in France by Imprimerie AGL

Purchase of I^2C Components by STMicroelectronics conveys a license under the Philips I^2C Patent. Rights to use these components in an I^2C system is granted provided that the system conforms to the I^2C Standard Specification as defined by Philips.

STMicroelectronics Group of Companies
Australia - Brazil - China - Finland - France - Germany - Hong Kong - India - Italy - Japan - Malaysia - Malta - Morocco - Singapore - Spain
Sweden - Switzerland - United Kingdom - U.S.A.

http://www.st.com